Rabaraba district is a remote, mountainous area of Papua New Guinea. Access to established health facilities is difficult. National government policy encourages women to attend a nurse or community health worker for antenatal care at a health centre or aid post. If identified as being at high risk, the woman is advised to deliver at a larger health centre or hospital. Maternal and child health patrols are carried out by health centre staff to remote areas to provide — among other things — antenatal care. Routine antenatal treatment for women involves a single dose of albendazole (after 16–20 weeks gestation), adult diphtheria and tetanus booster (unless a woman is a grandmultipara), antimalarial therapy (chloroquine followed by prophylactic weekly chloroquine), and daily iron and folate. Many women deliver in their own village. To improve maternal outcomes, particularly maternal mortality, village birth attendants (VBAs) have been trained in smaller villages. The maternal mortality ratio in Papua New Guinea is 390 per 100 000 live births (compared to Australia where it is 6 per 100 000 live births).

The goals of a VBA program are to reduce maternal and child mortality and morbidity, and to improve reproductive health. Training of VBAs is carried out after raising community awareness of both the role of a VBA and the program. Village birth attendants are volunteers who undergo a 3 week training course in basic midwifery skills under the instruction of a nurse and/or community health worker (VBA trainer). Training makes use of flipcharts in conjunction with practical sessions such as attending an antenatal clinic. Women chosen to train as VBAs have had at least one child of their own – this enhances their credibility and status within the community. Communities are encouraged to support their VBA, although they are not expected to pay them. District medical officers (volunteer general practitioners) may also provide support. We evaluated the VBA program in the district of Rabaraba in Papua New Guinea.

Method
Semi-structured interviews with 56 voluntary village birth attendants.

Results
Village birth attendants supervise and assist women with labour and delivery. Many have additional roles in their community. Most are motivated by a desire to help the women in their community. Common difficulties encountered include obstetric and logistical problems. The most common reason for ceasing work is family pressure or lack of support.

Discussion
Village birth attendants may contribute toward an improvement in maternal morbidity and mortality in remote areas of Papua New Guinea.
Activities carried out by VBAs
Deliveries VBAs had assisted with were few (average 8), and infrequent (about 2 in the previous 12 months). But many had additional roles with about half assisting with maternal and child health patrols, most performing antenatal checks; and fewer referring antenatal women with problems, providing health promotion, and referring women requesting family planning. Some VBAs had attended all deliveries in their village in the previous year.

Table 1. Why do you do this work?

- To help the mothers of my village
- Because mothers are suffering and I want to help them
- No one to help the mothers if I stop, so I'll continue

Table 2. What problems have you encountered?

- When the cord gets stuck after the baby
- Big bleeding
- Difficult when baby's legs come first

Benefits and difficulties faced by VBAs
For nearly all VBAs, the main benefit was the pleasure derived from serving or helping their community (45) and assisting women to deliver their babies safely (24). Others found the work interesting, or appreciated acquiring useful knowledge (19) (Table 1). Often they received verbal thanks for their work, a few received a meal, gifts of food or other forms of assistance, very few received money.

Problems and difficulties included obstetric problems (Table 2), logistical problems (such as wanting to refer a mother and not having access to transport), conflict with the mother’s family, and problems relating to lack of support from the community (8). Four VBAs had stopped working – all for family reasons. The majority of the VBAs were happy to continue their work in the absence of concrete rewards saying that dedication to their work prevented them from stopping (37).

Discussion
None of the VBAs declined to be interviewed. However, some, on hearing that interviews were occurring, avoided the centre as they felt inhibited having to discuss problems with a district medical officer. Data collected through interpreters may be inaccurate. In addition, Melanesian culture can mean people give answers they feel will please the person asking them. It was difficult to talk to VBAs who had ceased to work, which will have biased results to those who are happy with, and willing to discuss the program, thereby giving an over optimistic assessment of the program.

The greatest impact on improving maternal and child health is likely to be via the role VBAs perform in encouraging women to attend antenatal clinics (thereby allowing the detection and appropriate management of high risk pregnancies), and by the promotion of family planning and other health promotion activities. Thus, it is encouraging to see that the vast majority of VBAs are performing these roles. These interactions also provide opportunities for the VBA to provide women with social and psychological support – an important component of good quality antenatal care.

In many cultures, the tradition is for kinswomen to deliver babies. In some communities of Rabaraba, the VBA assists all deliveries, while in others most occur without their supervision. Many VBAs described women as being ‘shy’ or ‘hiding’ from the VBA, probably because issues related to sex, pregnancy and childbirth are considered taboo. Deep rooted cultural practices are unlikely to change overnight, but the persistence and development of the program may lead to gradual change.

The VBAs receive little external reward other than thanks. Their motivation seems to be the desire to serve their community and the stimulating work. Potential barriers were obstetric complications and the logistics of referring women in need of urgent treatment. However, despite these stresses, none cited them as reasons to stop working.

The experiences of the VBA program are unlikely to reform health care to indigenous women in remote Australia as resources in this country allow easier access to health centres and formally trained health workers, even if some women still choose to give birth locally. Perhaps indigenous liaison officers and indigenous health workers already play similar roles in the social and psychological support of pregnant women, and this function may make childbirth in remote Australian communities safer.

Implications of this study for general practice

- GPs working in developing countries should be aware of similar programs that can play an important role in the improvement of maternal and child health care, particularly in rural, isolated communities.
- Cultural and personal factors are as important as access in the uptake of health care.
- GP involvement with, and support of such programs may enhance their effectiveness.

Conflict of interest: LB received a grant from the RACGP, Family Medical Care Education and Research Foundation.

Acknowledgments
Thanks to the RACGP (Family Medical Care Education and Research Foundation) for funding this study. To Professor Charles Bridges-Webb for advice, the Anglican Health Service of Papua New Guinea, Voluntary Services Overseas (VSO), Sister Cathleen Eric, the VBAs of Rabaraba District, Dr Sudip Nandy and Dr Catherine Foley.

References

Correspondence
Email: louise_bettiol@health.qld.gov.au